U. S. FOREST SERVICE

RESEARCH NOTE NC-50

NORTH CENTRAL FOREST EXPERIMENT STATION, FOREST SERVICE—U.S. DEPARTMENT OF AGRICULTURE

Folwell Avenue, St. Paul, Minnesota 55101

Michigan's Timber Volume

ABSTRACT.—Michigan's timber volumes increased about two-fifths since 1955 reaching 15.0 billion cubic feet of growing stock including 33.7 billion board feet of sawtimber-size material in 1966.

Michigan's timber volume increased 40 percent between 1955 and 1966 to 15.0 billion cubic feet of growing stock (table 1) and 33.7 billion board feet of sawtimber (table 2). While most stands are still young, they are approaching full stocking. Net annual growth in 1966 was 31 cubic feet per acre for growing stock and 105 board feet for sawtimber, up from 26 and 60, respectively.

During the 11 years between the two surveys, all species and species groups increased in growing stock (or total cubic foot) volume except the elms (fig. 1). Timber volume accumulated most rapidly in the northern Lower Peninsula. Only in the southern Lower Peninsula where the Dutch elm disease was serious and many heavily stocked stands were lost to urban development and highway construction, did timber volume decline. In 1966, the State's growing stock was about equally divided between the Upper and Lower Peninsulas. The largest growing stock volumes were found in the Upper Peninsula counties of Marquette, Ontonagon, Iron, Chippewa, Gogebic, and Baraga.

In terms of total volume, aspen is still the most abundant species in Michigan, comprising 15 percent of the growing stock. But its position is being challenged by sugar maple whose volume is increasing more rapidly. Sugar maple has already attained first place in the Upper Peninsula. The oaks make up 10 percent and red maple 8 percent of growing stock. Softwoods comprise slightly over one-fourth of the growing stock volume, having gained about 2 percent on the hardwoods since the last survey. Northern white cedar is the most abundant softwood, accounting for 6 percent of total volume.

Turning from growing stock to sawtimber volume, we find a slightly different situation. Sugar maple is by far the leading sawtimber species in Michigan, comprising 17 percent of the volume. The oaks account for 12 percent and hemlock 8 percent. The aspen-paper birch group showed the most rapid growth; aspen sawtimber volume more than doubled during the 11-year period.

Approximately half the growing stock and sawtimber volume of sugar maple, yellow birch, and hemlock in the State is found in the western Upper Peninsula. Aspen and the red and jack pine volume is heavily concentrated in the northern Lower Peninsula; beech is concentrated in the eastern Upper Peninsula.

Volume of all diameter classes has increased since 1955 but the largest rise has been in poletimber-size trees (fig. 2). Much improvement in quality of sawtimber trees may be expected as the wave of second growth (developed in closed stands) moves into the larger diameter classes.

Statistics presented here are from the second and third forest surveys of Michigan authorized by Congress and conducted by the U.S. Forest Service in cooperation with the Michigan Department of Conservation and others. The statistical accuracy is ± 1.2 percent (2 times out of 3) for growing stock volume and ± 2.4 percent (same basis) for sawtimber volume.

CLARENCE D. CHASE
Principal Resource Analyst

1968

Table 1.—*Volume of growing stock*[1] *on commercial forest land, by counties and species groups,*[2] *Michigan, 1966*

(Million cubic feet)

County	All species	SOFTWOODS						HARDWOODS					
		White pine	Other pine	Spruce	Balsam fir	Hemlock	Other soft-woods	Aspen	Paper birch	Oak	Sugar maple-Yellow birch	Other soft Hard-woods	Other hard Hard-woods
EASTERN UPPER PENINSULA													
Alger	491.2	11.7	28.5	18.3	30.6	30.5	35.8	40.3	21.6	3.3	124.5	103.4	42.7
Chippewa	565.2	22.8	33.1	37.4	48.0	25.7	59.4	63.8	31.2	2.3	106.3	100.8	34.4
Delta	457.2	14.9	38.5	24.9	35.7	17.6	50.4	61.4	25.7	2.8	75.8	86.4	23.1
Luce	435.1	18.9	37.3	28.7	29.6	22.4	54.2	31.1	22.4	2.1	87.2	72.4	28.8
Mackinac	442.7	13.8	16.9	22.3	34.8	18.9	52.0	58.4	30.6	2.7	82.9	83.3	26.1
Menominee	409.4	13.5	13.3	23.7	32.4	17.7	59.4	44.9	25.1	4.2	73.4	79.8	22.0
Schoolcraft	494.0	23.4	42.3	28.3	35.2	25.3	45.2	43.7	25.0	2.5	95.1	96.8	31.2
Total	3,294.8	119.0	209.9	183.6	246.3	158.1	356.4	343.6	181.6	19.9	645.2	622.9	208.3
WESTERN UPPER PENINSULA													
Baraga	527.0	14.5	10.9	35.5	36.4	41.6	25.0	61.0	16.0	10.1	187.4	88.6	-
Dickinson	371.7	17.5	10.3	28.4	38.0	16.1	31.9	83.7	16.6	8.6	71.8	48.8	-
Gogebic	538.4	8.8	9.6	22.9	40.0	39.6	30.9	73.4	10.9	7.6	194.0	100.6	.1
Houghton	498.2	9.7	8.7	17.6	27.7	47.5	19.8	65.3	13.2	9.2	192.0	87.4	.1
Iron	591.3	22.5	7.6	43.2	47.0	39.1	30.1	100.1	21.6	10.3	180.4	89.4	-
Keweenaw	211.8	7.7	2.2	10.8	14.0	18.4	11.0	21.9	6.1	6.0	80.7	33.0	-
Marquette	939.9	43.2	35.8	79.8	67.7	64.3	70.0	119.8	31.9	24.7	268.0	134.6	.1
Ontonagon	614.1	12.8	6.9	22.5	39.0	41.6	24.2	115.8	17.9	10.8	208.0	114.5	.1
Total	4,292.4	136.7	92.0	260.7	309.8	308.2	242.9	641.0	134.2	87.3	1,382.3	696.9	.4
NORTHERN LOWER PENINSULA													
Alcona	269.8	4.4	10.9	5.7	12.6	3.7	23.8	64.0	16.6	47.1	15.1	50.5	15.4
Alpena	178.7	3.2	3.1	6.1	13.1	4.0	23.6	39.2	12.5	14.3	11.0	36.9	11.7
Antrim	145.2	1.9	6.5	1.4	3.1	2.7	8.3	26.8	6.9	20.1	19.9	34.7	12.9
Arenac	82.1	1.2	3.6	1.2	2.4	1.1	5.8	19.0	4.1	9.1	5.5	22.4	6.7
Bay	35.1	.6	.6	.3	1.1	.6	2.7	8.2	1.9	2.4	3.4	10.3	3.0
Benzie	117.6	1.3	2.5	.8	2.8	2.4	7.4	20.7	5.6	11.4	16.1	33.8	12.8
Charlevoix	165.0	2.1	2.3	1.8	4.5	4.0	12.6	30.8	7.9	14.5	26.1	41.8	16.6
Cheboygan	262.8	5.0	14.4	5.9	12.5	4.6	22.3	54.6	15.0	31.0	21.5	58.1	17.9
Clare	195.8	2.8	3.5	1.9	5.6	3.4	12.5	43.9	10.1	21.8	22.1	51.6	16.6
Crawford	197.3	3.5	27.0	1.6	4.8	1.9	10.4	32.2	8.7	53.4	12.6	31.4	9.8
Emmet	183.8	2.3	3.1	2.2	5.0	4.4	15.2	31.7	8.9	15.8	28.2	48.0	19.0
Gladwin	134.5	2.0	3.0	1.5	4.0	1.9	8.1	37.8	8.4	12.0	10.5	35.4	9.9
Grand Traverse	130.3	3.4	7.4	.8	2.1	2.5	6.7	17.2	5.7	25.9	16.2	30.7	11.7
Iosco	186.2	3.2	21.7	2.2	6.6	2.5	13.7	40.3	11.6	28.0	11.2	34.6	10.6
Isabella	80.1	1.2	1.4	.9	2.1	1.5	4.8	18.2	4.2	8.7	8.0	22.1	7.0
Kalkaska	205.8	4.3	19.3	3.3	8.1	3.9	16.9	32.8	11.9	26.7	21.7	41.9	15.0
Lake	202.4	3.9	15.5	.4	2.0	1.2	4.8	35.2	6.6	84.8	8.9	29.0	10.1
Leelanau	100.1	1.5	3.2	.7	2.4	2.2	4.9	19.3	6.9	8.6	16.2	24.7	9.5
Manistee	175.3	3.5	7.3	1.0	2.8	2.4	7.0	34.1	7.3	42.4	17.1	36.8	13.6
Mason	117.1	2.5	7.4	.4	1.2	1.9	3.4	19.5	4.5	30.0	12.9	24.3	9.1
Mecosta	110.6	1.9	3.3	.6	2.1	1.8	5.1	23.5	6.2	19.4	13.1	24.7	8.9
Midland	121.0	1.8	2.3	1.3	3.8	1.6	7.9	35.0	7.9	10.9	8.7	31.0	8.8
Missaukee	203.8	4.3	3.3	3.9	7.8	4.2	19.1	46.6	11.6	15.3	24.5	46.6	16.6
Montmorency	239.0	3.8	16.1	4.4	9.8	3.9	19.8	49.6	13.6	26.5	24.6	50.2	16.7
Newaygo	248.2	4.7	10.8	1.6	5.0	3.3	12.3	48.5	10.6	59.1	19.9	54.1	18.3
Oceana	117.0	1.7	4.7	.4	1.3	2.2	4.0	19.2	4.4	25.3	15.5	27.1	11.2
Ogemaw	180.0	2.7	14.1	1.5	4.2	2.7	8.4	35.3	8.5	38.9	15.6	36.1	12.0
Osceola	138.8	1.9	2.8	1.0	3.0	2.6	7.5	31.4	7.4	14.1	17.9	36.5	12.7
Oscoda	226.5	3.8	38.2	2.9	7.6	2.5	15.1	45.9	10.4	42.2	10.9	35.8	11.2
Otsego	205.0	3.5	6.9	3.1	8.4	3.8	18.9	48.2	12.6	17.4	23.4	44.2	14.6
Presque Isle	238.3	3.8	9.2	6.1	12.4	4.3	28.4	47.3	14.1	24.2	19.0	52.7	16.8
Roscommon	203.9	3.8	14.1	4.8	9.4	2.8	20.6	37.9	11.0	42.7	11.3	34.5	11.0
Wexford	175.7	2.5	10.9	1.1	3.8	3.3	9.3	35.1	8.2	20.6	23.8	42.2	14.9
Total	5,572.8	94.0	300.4	72.8	177.4	91.8	391.3	1,129.0	291.8	864.6	532.4	1,214.7	412.6
SOUTHERN LOWER PENINSULA													
Allegan	85.8	2.4	1.3	-	-	.8	1.0	5.7	1.1	23.3	6.4	30.0	13.8
Barry	64.2	1.3	.5	-	-	.2	.7	2.9	.3	23.4	3.6	19.8	11.5
Berrien	48.2	.9	.3	-	-	.2	.5	2.3	.4	16.3	3.3	15.7	8.3
Branch	38.4	.9	.1	-	-	.1	.4	2.3	.3	13.7	2.5	11.7	6.4
Calhoun	66.6	1.0	.3	-	-	.2	1.0	4.8	.6	21.9	3.1	22.3	11.4
Cass	53.4	1.0	.5	-	-	.2	.6	3.6	.4	18.5	3.9	15.4	9.3
Clinton	33.9	.8	.1	-	-	.3	.1	1.7	.1	9.4	2.8	12.6	6.0
Eaton	36.0	1.1	.2	-	-	.4	.3	2.1	.5	7.7	3.6	13.8	6.3
Genesee	41.2	.5	.2	-	-	.1	.6	3.2	.3	13.8	2.3	13.1	7.1
Gratiot	33.6	.7	.1	-	-	.2	.4	6.4	.6	7.0	2.0	11.6	4.6
Hillsdale	48.5	.8	.3	-	-	.2	.2	2.2	.4	16.7	3.2	16.1	8.4
Huron	45.6	.3	-	-	-	.1	.5	8.0	.8	7.9	2.0	19.6	6.4
Ingham	41.7	.7	.1	-	-	.2	.2	1.6	.1	12.5	3.7	14.6	8.0
Ionia	41.1	1.7	.4	-	-	.5	.4	2.6	.5	9.6	4.1	14.4	6.9
Jackson	61.7	1.0	1.0	-	-	.1	.5	3.2	.3	24.7	3.5	17.3	10.1
Kalamazoo	45.4	.7	.6	-	-	.1	.6	3.2	.4	15.7	2.4	14.2	7.5
Kent	82.1	2.0	.9	-	-	.6	.8	5.7	.8	24.1	7.0	26.3	13.9
Lapeer	51.4	1.2	.3	-	-	.3	.8	4.0	.7	15.1	3.2	17.1	8.7
Lenawee	41.3	.9	.2	-	-	.1	.3	1.8	.2	16.4	2.2	12.1	7.1
Livingston	58.7	1.0	.9	-	-	.2	.5	3.0	.5	24.0	3.4	15.9	9.3
Macomb	35.1	.7	.3	-	-	-	.4	1.7	.2	14.2	2.0	9.5	6.1
Monroe	23.1	.2	.2	-	-	-	.2	1.4	.1	5.5	1.3	10.2	4.0
Montcalm	92.7	2.0	1.2	-	-	.4	1.5	6.9	1.3	29.2	6.5	29.6	14.1
Muskegon	124.0	2.7	2.4	-	-	.4	1.6	8.1	.9	47.3	7.2	33.4	20.0
Oakland	83.7	1.4	.8	-	-	.2	1.3	6.4	.8	30.1	4.2	25.5	13.0
Ottawa	46.5	1.6	3.2	-	-	.3	.7	2.4	.2	16.3	2.9	11.7	7.2
Saginaw	70.2	1.4	.3	-	-	.3	.8	9.3	.8	16.9	4.2	25.9	10.3
St. Clair	52.9	1.3	.3	-	-	.4	.8	4.3	.6	15.3	4.4	16.9	8.6
St. Joseph	39.7	.6	.2	-	-	-	.4	2.4	.3	15.1	1.5	12.6	6.6
Sanilac	39.6	.8	.2	-	-	.2	.7	8.2	.6	6.4	2.4	14.5	5.6
Shiawassee	30.3	.9	.1	-	-	.3	.1	1.5	.3	7.4	3.2	11.0	5.5
Tuscola	66.5	1.2	.4	-	-	.2	.8	13.0	1.1	14.7	4.0	21.9	9.2
Van Buren	58.5	1.2	.8	-	-	.3	.7	3.6	.5	14.5	4.1	22.4	10.4
Washtenaw	57.2	1.0	.3	-	-	.3	.4	1.8	.2	22.2	4.3	16.3	10.4
Wayne	26.2	.6	.1	-	-	.2	.1	2.2	.2	8.2	2.0	8.6	4.0
Total	1,865.0	38.5	19.1	-	-	8.6	20.9	143.5	17.4	585.0	122.4	603.6	306.0
State Total	15,025.0	388.2	621.4	517.1	733.5	566.7	1,011.5	2,257.1	625.0	1,556.8	2,682.3	3,138.1	927.3

SEE FOOTNOTES ON PAGE 4.

Table 2.—*Volume of sawtimber[1] on commercial forest land, by counties and species groups,[2] Michigan 1966*
(Million board feet)[3]

County	All species	SOFTWOODS			HARDWOODS							
		White and red pine	Hemlock	Other softwoods	Sugar maple	Yellow birch	Select oak	Beech	Red maple	Basswood	Elm	Aspen and Paper birch	Other hardwoods
EASTERN UPPER PENINSULA													
Alger	1,295.6	112.5	156.8	161.3	315.3	93.7	9.0	166.9	96.8	22.7	38.5	79.6	42.5
Chippewa	1,283.6	182.9	132.3	210.1	255.3	77.1	5.0	133.2	73.6	21.2	35.5	102.6	54.8
Delta	973.9	145.7	90.7	181.3	162.0	56.4	4.6	84.8	55.9	17.4	26.9	93.4	54.8
Luce	1,100.8	172.7	115.3	199.5	218.8	70.2	5.4	113.2	68.8	14.5	25.0	61.9	35.5
Mackinac	974.8	118.3	96.0	169.5	185.5	59.1	5.1	98.3	57.1	17.6	25.7	95.6	47.0
Menominee	930.8	119.1	89.7	189.8	160.1	57.0	8.5	82.3	57.1	15.5	28.8	79.5	43.4
Schoolcraft	1,190.1	184.3	129.4	182.2	228.1	74.6	6.8	120.1	81.3	16.2	36.8	83.4	46.9
Total	7,749.6	1,035.5	810.2	1,293.7	1,525.1	488.1	44.4	798.8	490.6	125.1	217.2	596.0	324.9
WESTERN UPPER PENINSULA													
Baraga	1,434.0	104.4	213.4	225.9	439.7	133.1	26.5	-	69.2	29.3	49.3	111.6	31.6
Dickinson	873.1	123.1	83.8	251.0	152.6	48.4	15.7	-	30.4	10.4	21.5	113.4	22.8
Gogebic	1,132.6	59.4	168.0	167.4	371.2	114.4	17.4	-	52.0	28.2	44.3	77.0	33.3
Houghton	1,211.4	63.6	206.7	144.3	414.0	122.2	21.9	-	59.2	28.4	31.4	93.1	26.6
Iron	1,329.3	129.9	176.8	227.0	373.3	114.8	21.6	-	57.4	22.8	36.3	143.4	26.0
Keweenaw	615.0	50.9	97.9	87.4	198.2	60.5	12.8	-	30.6	10.1	15.4	41.2	10.0
Marquette	2,525.5	302.7	342.7	540.5	631.6	194.5	52.2	-	107.1	37.6	73.2	197.3	46.1
Ontonagon	1,298.4	78.6	184.5	182.5	410.8	116.2	21.1	-	60.9	28.9	45.8	131.0	38.1
Total	10,419.3	912.6	1,473.8	1,826.0	2,991.4	904.1	189.2	-	466.8	195.7	317.2	908.0	234.5
NORTHERN LOWER PENINSULA													
Alcona	454.0	36.7	16.0	47.1	21.4	2.3	74.8	14.5	27.3	15.8	38.6	88.8	70.7
Alpena	299.9	23.4	17.7	47.4	16.3	2.0	25.0	9.4	20.6	11.3	27.9	60.4	38.5
Antrim	284.8	14.4	13.2	15.9	34.9	1.4	37.3	22.3	16.7	18.4	29.9	43.0	37.4
Arenac	156.6	10.1	5.4	9.7	11.0	.9	14.6	6.3	17.8	8.7	21.6	27.2	23.3
Bay	69.3	3.9	3.1	4.6	6.1	.4	4.9	3.7	7.6	3.4	10.2	12.2	9.2
Benzie	258.2	10.9	12.7	11.7	31.5	1.4	24.4	23.0	24.2	18.8	34.9	33.4	31.3
Charlevoix	330.5	15.2	19.7	21.1	45.5	1.9	32.6	32.4	18.1	24.7	34.5	47.0	37.8
Cheboygan	468.1	38.4	20.2	50.5	31.7	3.0	52.7	19.4	35.0	21.0	50.4	81.9	63.9
Clare	380.1	21.8	15.6	22.3	36.8	2.2	41.7	23.5	32.1	24.6	44.8	65.1	49.6
Crawford	319.5	25.0	7.8	31.7	16.5	1.4	77.3	11.1	14.3	12.2	21.0	43.0	58.2
Emmet	381.5	16.9	22.2	25.5	51.6	2.3	34.9	36.3	21.1	27.4	43.8	52.3	47.2
Gladwin	251.0	17.0	8.7	15.0	18.0	1.2	22.4	10.6	24.4	12.9	32.2	53.6	35.0
Grand Traverse	276.8	21.2	12.5	13.8	31.1	1.1	40.0	22.6	20.6	18.6	30.5	28.8	36.0
Iosco	325.4	32.5	10.9	37.0	17.6	1.8	46.4	11.0	21.4	12.2	29.5	61.5	43.6
Isabella	165.2	9.0	7.4	8.4	16.0	.9	15.7	9.3	16.7	9.2	21.8	27.2	23.6
Kalkaska	371.5	33.7	18.0	40.7	34.6	2.2	44.6	21.4	21.4	20.0	34.9	54.7	45.3
Lake	359.8	26.4	5.3	12.7	15.0	.9	120.6	12.3	18.6	12.1	20.7	42.6	72.6
Leelanau	200.8	13.2	10.9	10.8	27.1	1.2	19.2	17.7	10.9	14.8	20.8	33.6	20.6
Manistee	350.7	24.8	12.1	13.6	32.5	1.3	65.9	25.0	20.0	20.5	34.3	48.6	52.1
Mason	237.0	17.4	10.0	8.5	25.0	1.0	45.5	18.3	11.8	13.6	23.6	26.6	35.7
Mecosta	225.3	14.7	9.2	9.6	23.1	1.0	37.0	16.0	12.4	12.2	22.9	35.0	32.2
Midland	217.8	16.2	7.0	14.0	12.2	1.1	19.9	7.6	20.8	10.2	26.9	50.4	31.5
Missaukee	381.7	31.3	20.0	31.6	42.6	2.0	32.4	24.7	20.4	23.4	33.0	76.2	44.1
Montmorency	412.2	30.0	16.6	46.2	37.3	2.7	45.8	22.1	23.0	23.2	38.8	75.7	50.8
Newaygo	476.4	33.7	15.7	22.1	36.7	2.3	89.2	26.0	35.4	25.2	48.2	66.6	75.3
Oceana	255.9	12.0	11.3	8.1	32.4	1.1	43.8	23.7	14.2	16.2	29.7	28.0	35.4
Ogemaw	318.5	20.1	13.2	22.2	25.4	1.6	59.4	15.6	18.4	15.7	27.3	48.4	51.2
Osceola	278.5	14.9	13.1	13.3	31.7	1.6	28.7	21.9	19.4	19.0	33.0	46.3	35.6
Oscoda	365.4	32.0	10.4	45.4	15.5	2.0	65.2	10.6	20.5	11.5	29.0	64.1	59.2
Otsego	352.2	27.7	17.6	34.0	33.4	2.1	34.2	21.3	17.7	20.5	29.6	72.0	42.1
Presque Isle	415.4	28.3	18.8	52.0	29.6	2.8	42.8	18.3	28.1	18.4	43.2	73.2	59.9
Roscommon	342.8	26.4	12.2	43.8	17.4	1.5	63.4	11.0	17.7	12.0	25.1	56.0	56.3
Wexford	326.5	19.4	16.6	17.1	38.7	2.0	41.1	25.3	18.6	21.4	32.9	49.7	43.7
Total	10,309.3	718.6	431.1	807.4	896.2	54.6	1,443.4	594.2	667.2	549.1	1,025.5	1,673.1	1,448.9
SOUTHERN LOWER PENINSULA													
Allegan	245.7	16.2	5.8	1.5	20.2	.5	60.3	9.2	31.9	10.6	16.9	5.3	67.3
Barry	187.7	8.5	1.0	1.5	11.6	.4	58.4	6.3	27.4	5.2	12.3	1.6	53.5
Berrien	144.6	6.0	1.7	.6	10.2	.3	42.7	5.1	21.6	5.2	9.8	2.0	39.4
Branch	113.3	4.9	.9	.5	7.2	.2	36.1	3.4	16.0	3.5	7.7	1.8	31.1
Calhoun	178.8	6.5	1.1	1.7	9.2	.5	51.2	4.7	28.0	4.9	14.6	4.8	51.6
Cass	150.5	7.4	1.7	1.5	10.8	.4	45.6	5.8	19.7	4.7	8.8	2.7	41.4
Clinton	108.0	4.7	1.9	.2	8.8	.3	26.6	4.6	18.7	4.4	8.2	2.2	27.4
Eaton	104.2	7.4	2.4	.3	11.1	.3	21.2	5.2	14.9	5.4	8.1	1.9	26.0
Genesee	118.0	3.1	1.3	..9	7.3	.2	35.3	3.4	17.9	3.9	8.5	3.0	33.2
Gratiot	82.6	4.7	1.3	.4	6.3	.2	16.6	3.1	12.9	3.4	7.2	2.5	24.0
Hillsdale	148.2	5.4	1.4	.5	9.7	.6	45.1	5.2	23.6	4.2	10.4	2.7	39.4
Huron	109.2	1.7	.4	.8	4.8	.1	20.7	1.4	23.8	3.5	15.3	6.8	29.9
Ingham	134.8	4.5	1.7	.2	12.2	.6	35.7	6.7	22.7	5.2	10.1	1.1	34.1
Ionia	123.8	11.1	3.3	.6	13.0	.4	25.4	6.5	14.4	5.9	7.8	2.4	33.0
Jackson	180.0	7.2	.8	1.0	11.0	.6	62.6	5.4	23.8	4.6	10.2	2.3	50.5
Kalamazoo	127.0	5.8	.5	1.0	7.3	.4	37.9	3.8	18.4	3.6	8.7	2.6	37.0
Kent	229.7	13.8	4.0	1.0	21.5	.4	56.8	10.1	30.8	9.8	15.7	4.6	61.2
Lapeer	143.6	7.7	2.0	1.0	9.5	.3	39.2	4.6	20.0	4.8	9.7	3.0	41.8
Lenawee	123.1	5.8	.4	.3	6.8	.3	43.9	3.7	16.1	2.8	7.6	1.8	33.6
Livingston	170.8	7.7	1.1	.9	10.6	.5	58.8	5.4	20.9	4.4	9.5	2.6	48.4
Macomb	103.8	4.4	.2	.9	6.2	.3	35.2	3.6	13.6	2.1	6.3	1.3	29.7
Monroe	67.6	1.0	.4	.3	3.8	.1	15.6	1.5	15.1	2.4	7.5	1.7	18.2
Montcalm	245.1	13.0	2.7	2.3	18.1	.3	67.6	8.1	32.0	8.3	18.6	6.2	67.9
Muskegon	339.4	18.4	2.8	3.1	22.9	.5	106.8	11.0	40.7	9.4	19.5	5.2	99.1
Oakland	234.3	9.7	1.3	1.9	12.6	.3	75.2	5.5	31.5	5.9	16.5	5.7	68.2
Ottawa	123.4	9.6	2.1	.8	8.8	.2	37.5	4.2	14.0	3.8	5.7	1.1	35.6
Saginaw	190.2	9.2	2.0	1.5	12.0	.3	46.0	4.8	33.5	5.9	18.2	6.0	50.8
St. Clair	147.2	9.0	2.6	1.1	12.5	.3	38.8	5.9	18.9	6.3	10.0	3.0	38.8
St. Joseph	114.1	3.7	.2	.8	4.5	.1	36.6	2.1	18.8	2.4	8.2	2.1	34.6
Sanilac	92.4	5.4	1.5	1.0	6.9	.3	17.1	2.9	13.4	4.2	9.1	4.3	26.3
Shiawassee	95.4	5.6	2.3	.2	10.5	.2	20.5	5.0	14.3	4.6	7.2	1.2	23.8
Tuscola	153.0	8.3	1.7	1.2	11.3	.3	32.9	4.7	20.9	5.9	13.1	5.5	47.2
Van Buren	167.4	8.5	2.7	1.0	13.0	.4	38.3	6.3	28.0	6.6	14.9	3.8	43.9
Washtenaw	178.7	7.0	2.1	.6	14.3	.6	57.1	7.0	24.2	6.6	9.6	1.4	48.2
Wayne	79.9	3.8	1.4	.3	6.2	.2	22.2	2.5	11.0	2.7	5.6	2.3	21.7
Total	5,255.5	256.7	60.7	33.4	372.7	11.9	1,467.5	178.7	753.4	177.1	377.1	108.5	1,457.8
State Total	33,733.7	2,923.4	2,775.8	3,960.5	5,785.4	1,458.7	3,144.5	1,571.7	2,378.0	1,047.0	1,937.0	3,285.6	3,466.1

SEE FOOTNOTES ON PAGE 4.

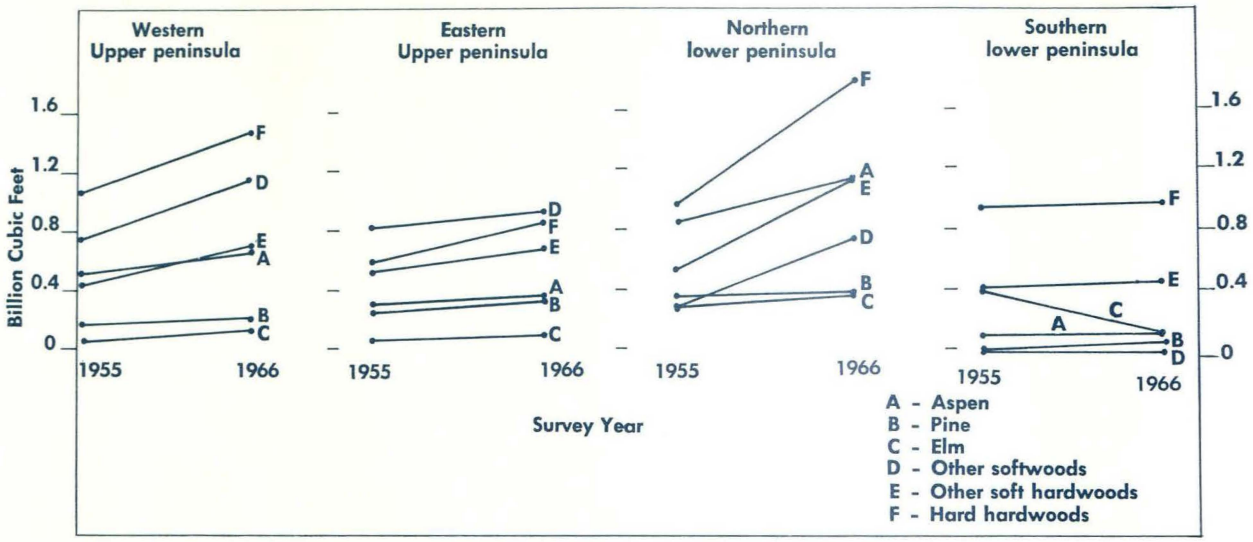

Figure 1.—Change in growing stock volume between surveys by survey unit and species group.

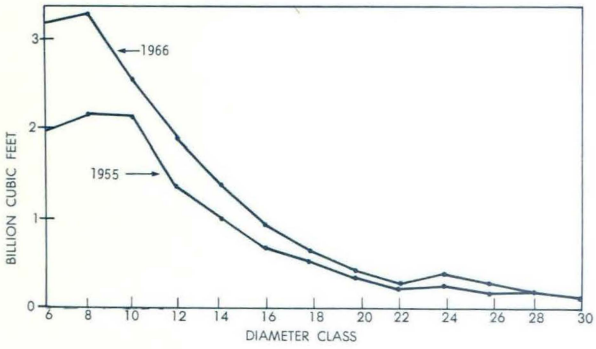

Figure 2.—Distribution of growing stock volume by diameter class, Michigan, 1955 and 1966.

FOOTNOTES: Table 1.

1 *Net volume of live poletimber and sawtimber trees from the stump to a variable 4-inch top diameter outside bark of the central stem. Does not include limbs or cull tree volume.*

2 *Species groups: Spruce—Black and white spruces.*
Other softwoods—Tamarack and northern white cedar.
Aspen—Bigtooth and quaking aspen.
Other soft hardwoods—Primarily red maple, black ash, balsam poplar, cottonwood, yellow poplar, basswood, black cherry, the elms, hackberry and sycamore.
Other hard hardwoods—Primarily hickory, beech, white ash and black walnut.

FOOTNOTES: Table 2.

1 *Net volume of live merchantable sawtimber trees (softwoods 9.0 inches d.b.h. or larger and hardwoods 11.0 inches d.b.h. and larger) from the stump to a point in the central stem at which utilization for sawn products is limited by large branches, forks or other defects, or by a diameter outside bark of 8.0 inches.*

2 *Species groups: Select oak—All white oaks and northern red oak. Aspen-paper birch—Bigtooth aspen, quaking aspen and paper birch.*

3 *International ¼-inch rule.*